

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-3. (Cancelled).

Claim 4. (Currently amended) ~~The A power supply of claim 1~~, for providing charge to a load from a first battery and a second battery, comprising:

a first power switch coupled to the first battery and the load;

a second power switch coupled to the second battery and the load; and

a power controller coupled to said first power switch, said second power switch, and the load, said power controller providing charge from the first battery to the load by closing said first power switch and providing charge from the second battery to the load by closing said second power switch;

wherein said power controller monitors a load voltage on the load and causes an increased charge to be supplied to the load when said load voltage is less than a predetermined voltage by increasing the amount of time that at least one of said first power switch or said second power switch is closed, and

wherein said power controller controls said first and second power switch to open and close in an alternating fashion, thereby supplying charge to the load from only one battery at a time.

Claim 5. (Currently amended) ~~The A~~ power supply ~~of claim 1~~, for providing charge to a load from a first battery and a second battery, comprising:

a first power switch coupled to the first battery and the load;

a second power switch coupled to the second battery and the load; and

a power controller coupled to said first power switch, said second power switch, and the load, said power controller providing charge from the first battery to the load by closing said first power switch and providing charge from the second battery to the load by closing said second power switch;

wherein said power controller monitors a load voltage on the load and causes an increased charge to be supplied to the load when said load voltage is less than a predetermined voltage by increasing the amount of time that at least one of said first power switch or said second power switch is closed, and

wherein said power controller determines an amount of charge that has been supplied from the first and second batteries.

Claim 6. (Original) The power supply of claim 5, wherein said power controller further comprises:

a plurality of counters adapted to determine an amount of time said first power switch has been closed and an amount of time said second power switch has been closed;

wherein said power controller determines an amount of charge that has been supplied from the first battery based on said amount of time said first power switch has been closed and determines an amount of charge that has been supplied from the second battery based on said amount of time said second power switch has been closed.

Claim 7. (Original) The power supply of claim 5, wherein said power controller controls the opening and closing of said first and second power switch to ensure that the discharging of the first battery and the second battery occurs at an equal rate.

Claim 8. (Original) The power supply of claim 5, wherein said power controller stops supplying charge to the load from the first battery when the first battery is depleted and stops supplying charge to the load from the second battery when the second battery is depleted.

Claim 9. (Original) The power supply of claim 5, wherein said power controller increases the amount of charge supplied to the load from the first battery when the second battery is depleted and increases the amount of charge supplied to the load from the second battery when the first battery is depleted.

Claim 10. (Original) The power supply of claim 5, wherein said power supply further comprises:

a display;

wherein said display is adapted to provide information to a user about the amount of charge remaining in the first and second batteries.

Claim 11. (Original) A power supply for providing a charge to a first battery and a second battery from a charge source, comprising:

a first power switch coupled to the first battery and the charge source;

a second power switch coupled to the second battery and the charge source; and
a power controller coupled to said first power switch and said second power switch, said power controller selectively providing a charge from the charge source to either the first battery or the second battery by closing said first power switch or said second power switch, respectively.

Claim 12. (Original) A power supply for providing a charge to a first battery and a second battery from a charge source, comprising:

a first power switch coupled to the first battery and the charge source;
a second power switch coupled to the second battery and the charge source; and
a power controller coupled to said first power switch and said second power switch, said power controller providing charge from the charge source to the first battery by closing said first power switch and providing charge from the charge source to the second battery by closing said second power switch;

wherein said power controller determines an amount of charge remaining in the first and second battery and causes an increased charge to be supplied to the first battery when said charge remaining on the first battery falls below a first predetermined level by increasing an amount of time that said first power switch is closed and causes an increased charge to be supplied to the second battery when said charge remaining on the second battery falls below a second predetermined level by increasing an amount of time that said second power switch is closed.

Claims 13-16. (Cancelled)

Claim 17. (Currently amended) ~~The~~ A power supply of claim 13, for supplying charge to a load from a plurality of batteries, comprising:

a plurality of power switches, wherein each of said plurality of power switches is coupled to one of the plurality of batteries and to the load; and

a power controller coupled to said plurality of power switches;

wherein said power controller controls each of said plurality of power switches to regulate the amount of charge supplied to the load from a corresponding one of the plurality of batteries, and wherein said power controller further comprises: a plurality of counters that track an amount of charge provided by each of the plurality of batteries.

Claim 18. (Currently amended) ~~The~~ A power supply of claim 13, for supplying charge to a load from a plurality of batteries, comprising:

a plurality of power switches, wherein each of said plurality of power switches is coupled to one of the plurality of batteries and to the load; and

a power controller coupled to said plurality of power switches;

wherein said power controller controls each of said plurality of power switches to regulate the amount of charge supplied to the load from a corresponding one of the plurality of batteries, and wherein the ~~power supply~~ power supply is implemented on the same chip as the load.

Claim 19. (Cancelled).

Claim 20. (Original) A power supply for supplying charge to a plurality of batteries from a charge source, comprising:

a plurality of power switches, wherein each of the plurality of power switches is coupled to the charge source and to one of the plurality of batteries; and

a power controller coupled to said plurality of controlled power switches;

wherein said power controller controls said power switches to regulate the amount of charge supplied to the plurality of batteries from the charge source.

Claim 21. (Original) A method for supplying charge to a load from a plurality of batteries, comprising the steps of:

monitoring a load voltage across the load;

comparing said load voltage to a predetermined voltage;

selecting one of the plurality of batteries;

controlling a switch to permit a charge to flow from said selected battery to the load for a time interval when said load voltage is less than said predetermined voltage.

Claim 22. (Original) The method of claim 21, further comprising the step of:

determining the amount of charge provided by said selected battery.

Claim 23. (Original) The method of claim 21, further comprising the step of:

determining the amount of charge sent to the load by said selected battery.

Claim 24. (Original) The method of claim 21, wherein said controlling step further comprises:

storing a charge from said selected battery in an inductor; and
releasing said stored charge from said inductor to the load.

Claim 25. (Original). A method for supplying charge to a load from a plurality of batteries, comprising the steps of:

monitoring a load voltage across the load;
comparing said load voltage to a predetermined voltage;
selecting one of the plurality of batteries;
controlling a switch to permit a quantity of charge to flow from said selected battery to the load when said load voltage is less than said predetermined voltage.